2 WALK AND CYCLE creating smarter connections

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UC UNIVERSITY OF CANTERBURY Te Whare Wānanga o Waitaha CHRISTCHURCH NEW ZEALAND

Is there a serious role for cycling in the renewal of Christchurch?

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Background

- Commuter & utility cyclist
- Teacher and Researcher
- Local Transport involvement
  - Regional Transport Committee
  - Urban Development Strategy Forum

→ Evidence based cycle advocate



Talk today

1. Urban challenges
2. What are the needs of potential bicycle users?
3. Can Christchurch be rebuilt as a city for bicycles?

Peak Oil

Climate change

Urban Challenges

Climate change and peak oil are real problems

Potentially technology could solve them

But:

- probably won't
- not in time
- at a cost society won't want to pay

But other major problem – HEALTH

- Technology cannot solve this
- Behaviour change is the key

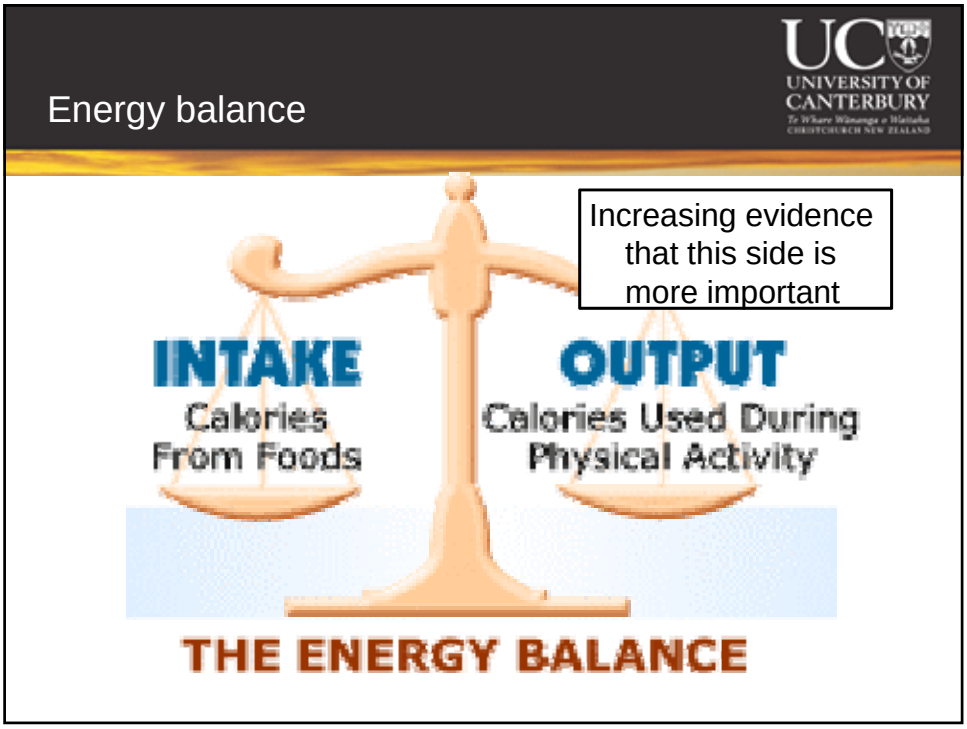
Obesity

"*New Zealand is in the grip of a global obesity epidemic, the future costs of which will be enormous, potentially unaffordable for the health system.*"

- Professor Norman Sharpe, New Zealand Heart Foundation medical director, Sept 2011

www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10752121

Energy balance



What sort of cycle infrastructure?

What do non-cyclists want?

What is best for their health?

Attracting the new cyclists

Assessment of the type of cycle infrastructure required to attract new cyclists

- NZ Transport Agency funded research
- To assess the type of infrastructure needed to attract ***'new'*** cyclists
- Investigate the barriers and motivations for cycling

Source: Kingham S, Koorey G and Taylor K, 2011, Assessment of the type of cycle infrastructure required to attract new cyclists. NZTA Research Report 449.

* Available on Conference Proceedings CD

Methods

Questionnaires to get an understanding of current transport patterns

- 4772 University of Canterbury Travel Surveys
- 376 Recreational Cyclists Questionnaire
- 122 Community Cycle Survey

Focus groups of 3-6 'potential' commuter cyclists

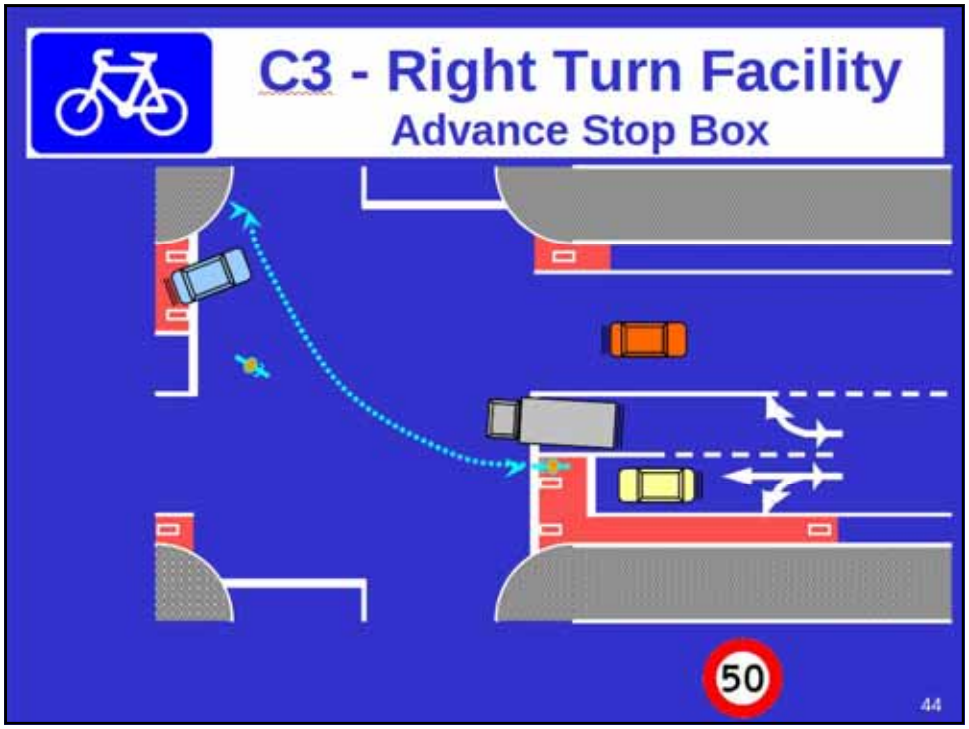
- discuss transport and cycling in general
- series of diagrams of cycle facilities shown
  - Participants asked to rate facility and frequency of cycling - Frequently, Sometimes, Rarely, Never

Findings

- Major barriers:
  - Safety (most significant)
  - Showering and changing facilities
  - Enjoyment of journey (relaxing and pleasant)
- Minor Barriers:
  - Bicycle parking
  - Work vehicles
  - Luggage capacity
  - Helmets
  - Clothing
  - Children
  - Weather
  - Logistics
  - Trip chaining
  - Night time cycling
  - Confidence
  - Cycling equipment (lights & fluoro vests)

Findings

- People were prepared to cycle 5-10 minutes longer for a more attractive (off-road) route
- Infrastructure
  - Consistency was important (most significant)
    - same facilities across the city
    - continuous facilities
  - Type of infrastructure



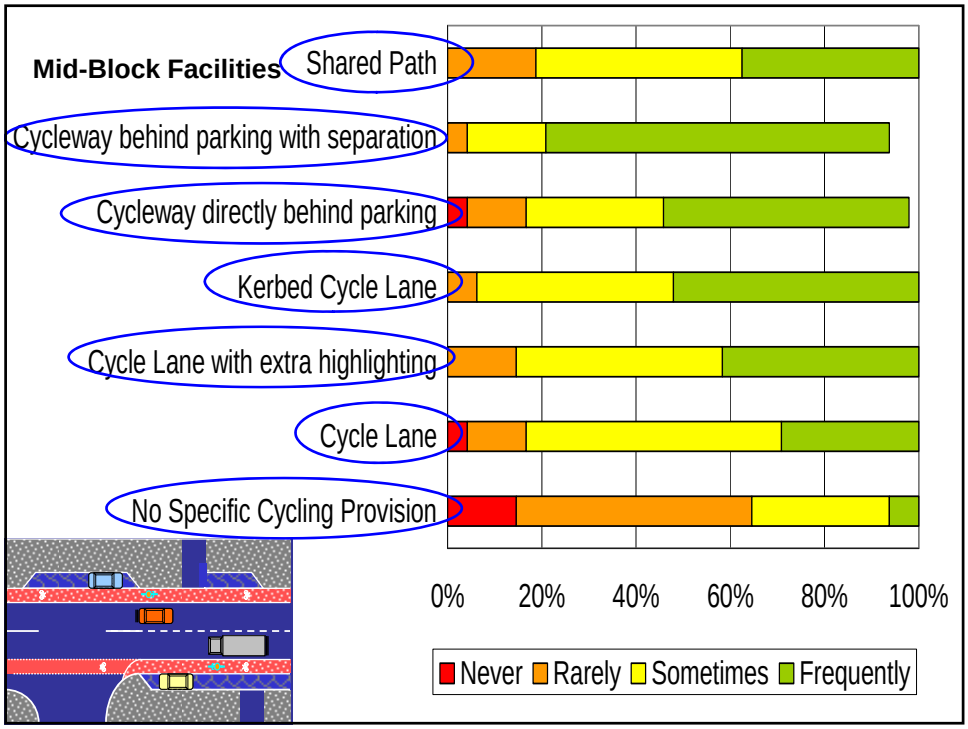
C3 - Right Turn Facility
Advance Stop Box

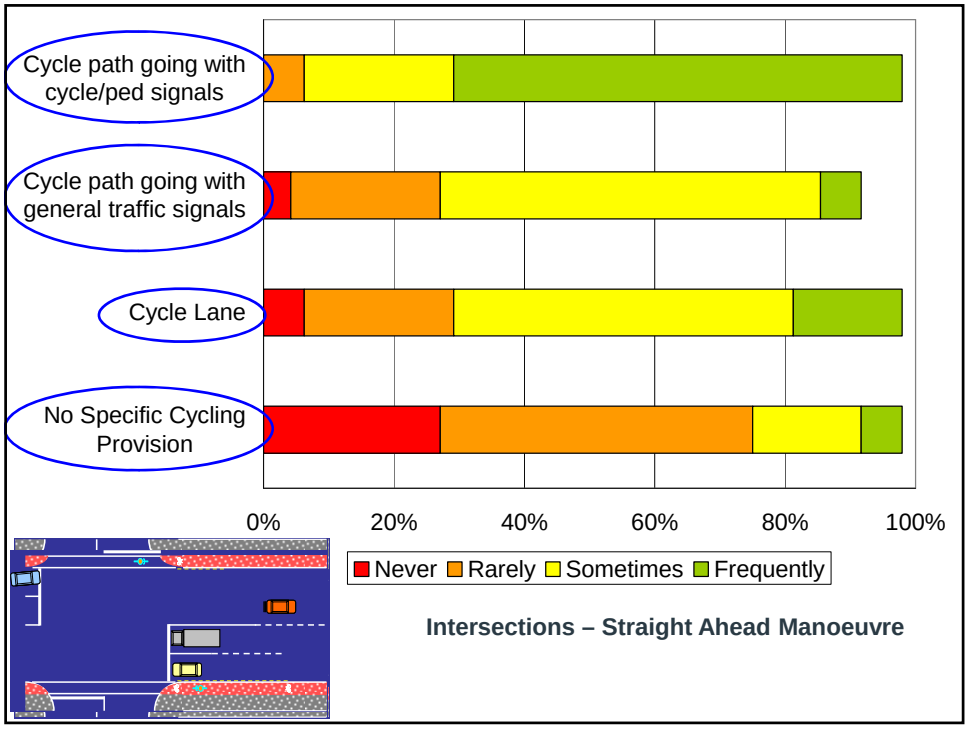
A4 - No Specific Cycling Provision

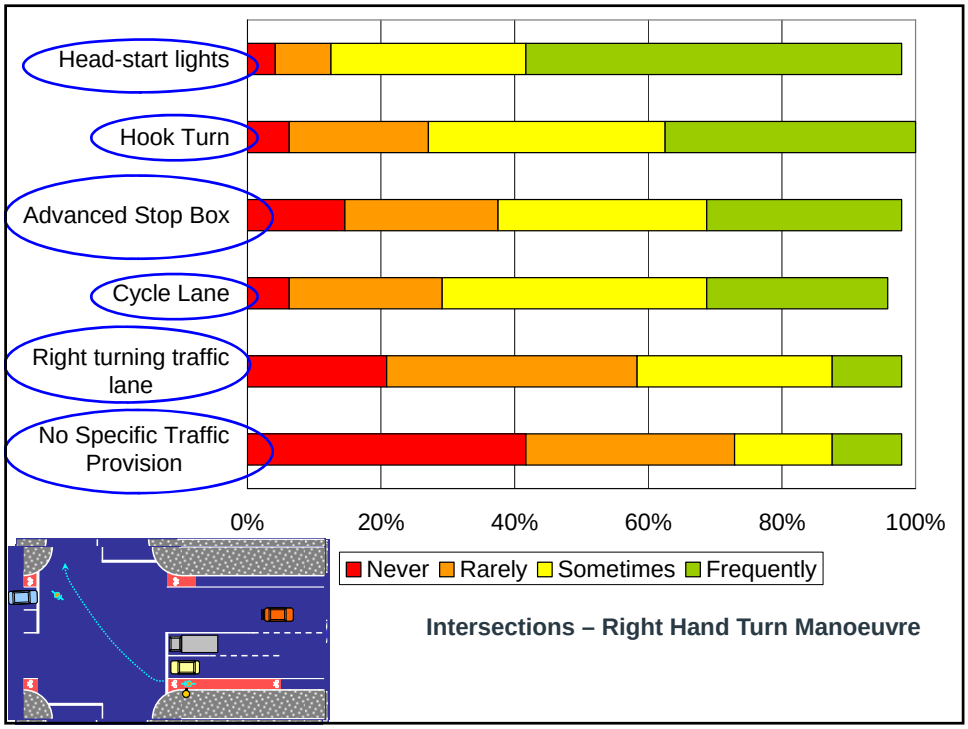
A6 - Marked Cycle Lane with extra Highlighting

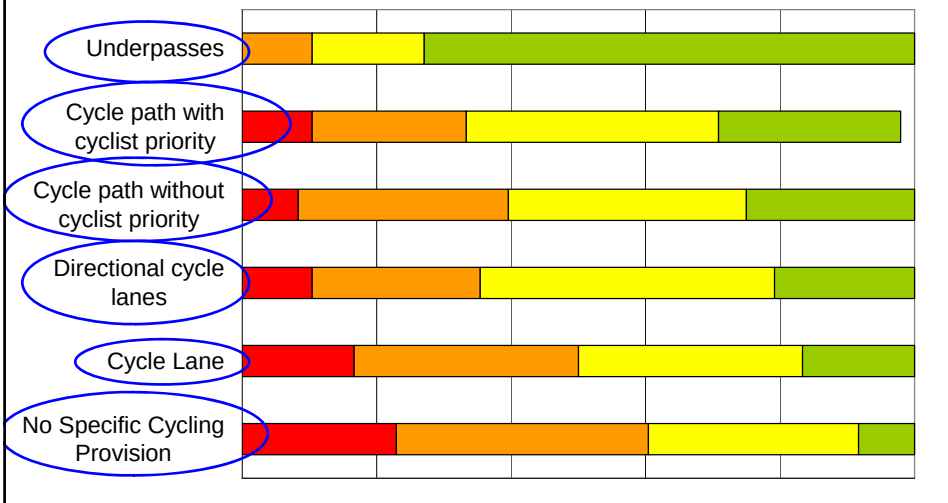
A7 - Kerbed Cycle Lane with parking behind

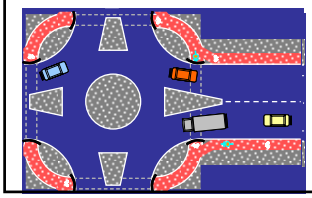
A5 - Kerbed Cycle Lane directly behind parking




Cycle path going with cycle/ped signals
Cycle path going with general traffic signals
Cycle Lane
No Specific Cycling Provision
0%
20%
40%
60%
80%
100%
Never
Rarely
Sometimes
Frequently
Intersections – Straight Ahead Manoeuvre


Head-start lights
Hook Turn
Advanced Stop Box
Cycle Lane
Right turning traffic lane
No Specific Traffic Provision
0%
20%
40%
60%
80%
100%
Never
Rarely
Sometimes
Frequently
Intersections – Right Hand Turn Manoeuvre

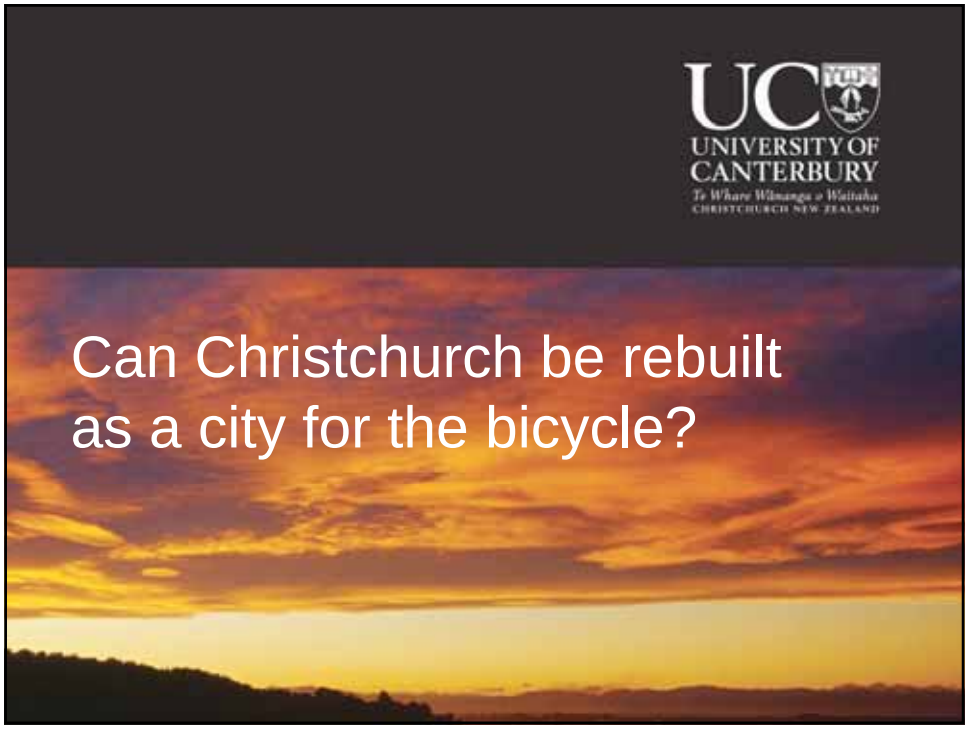




Roundabouts

Findings

- Danger is main barrier!
- Network of off-road routes is favoured
  - If not possible, then clearly marked cycle lanes are preferred (not just white lines)
- Some level of separation was preferred to sharing facilities with traffic or pedestrians
- If shared facilities are necessary, with pedestrians is preferred
- Different needs of experienced vs inexperienced cyclists
  - Policy and consultation implications



Process

- Share an Idea
  - Six weeks of ideas
    - Community Expo
    - Road show & Drop in
    - International Speaker Series
  - 106,000 ideas
- Central City Plan
  - Consultation
- CERA
  - More consultation
- Minister for Earthquake Recovery

The Draft Central City Plan

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- Draft Central City Plan (CCP) includes lots of positive cycle initiatives and promises

Streets for cycling

Christchurch is a relatively compact city where more daily journeys to, from and within the Central City could easily be undertaken by cycle.

To achieve this change of culture, however, people of all ages and abilities need to feel safe cycling.

Christchurch has a dry climate and flat topography which lends itself to cycling. As the Central City and its streets are rebuilt, the Council will develop better infrastructure for cycling. There will be more on-street cycle lanes on busy streets separated from traffic, as well as quiet routes linking green spaces across the city.

These facilities will be among the best in the world, providing perhaps the catalyst for the largest single change in how people might travel around the Central City itself.

Cycling to and within the Central City will be made easy with a new network of continuous and safe cycle routes. These cycle routes will be developed to seamlessly merge the shared slow speed spaces within the heart of the city with key destinations across the Central City and beyond.

Where possible, cycle lanes will be separated from nearby traffic and footpaths, while city-wide commuter cycle networks will link directly to the Central City. The safety of cyclists will be prioritised at busy streets and intersections.

High-quality cycle parking facilities will be increasingly provided. These will be secure, covered where possible and located at a wide range of key destinations. Cycles for hire will ideally become widely available at these facilities. Changing facilities and cycle repair workshops will also be considered. Secure cycle parking is also planned at the new public transport street stations and super stops to enable multi-modal journeys.

Larger businesses in the Central City will also be encouraged to provide attractive cycle parking, and employee shower and changing facilities.

Streets for cycling project

When: 2013 to 2018

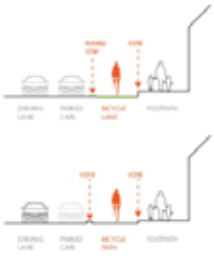
Recreational cycle paths

The cycle network on the city's streets will link up to leisure routes and parks within the city, particularly along the Avon River/ Otakaro

Cycle lanes

A cycle lane can be a separated and/or raised lane reserved for cyclists, usually between a parking lane and the footpath.

This provides a buffer to pedestrians and removes cyclists from traffic lanes in the street, offering less intimidating conditions for all cyclists. Alternatively, a cycle lane is painted or rumble strip on the street placed to the left of the vehicle traffic and parking lane.



Above: Cycle lane sections.
Left: Separated cycle lanes in Melbourne, Australia.

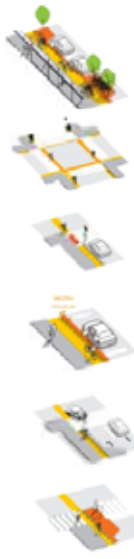
Slow core

The cycle network should overlap with the pedestrian network ensuring it is easy to switch between the two.

It must link up to attractive pedestrian routes, spaces and activities. The shared streets in the central core will cater for all transport choices and provide for slower speeds across all modes thereby improving the safety and experience for the pedestrian.

Cycle streets toolbox

As a new standard of cycle network across central Christchurch is delivered, some or all of the following features will be planned as appropriate to each route:



Bicycles always on the left-side
To avoid serious accidents between cars and cyclists at crossings, the cycle track must always be placed on the left side of the street. Since pedestrians are the slowest traffic, cyclists are most safe if placed next to the footpath

Intersections
Cycle tracks marked in a different colour at major intersections raises awareness with motorists

Bicycle head start
Time signals so that the bicyclist signal changes to green 4-6 seconds before the vehicular signal.

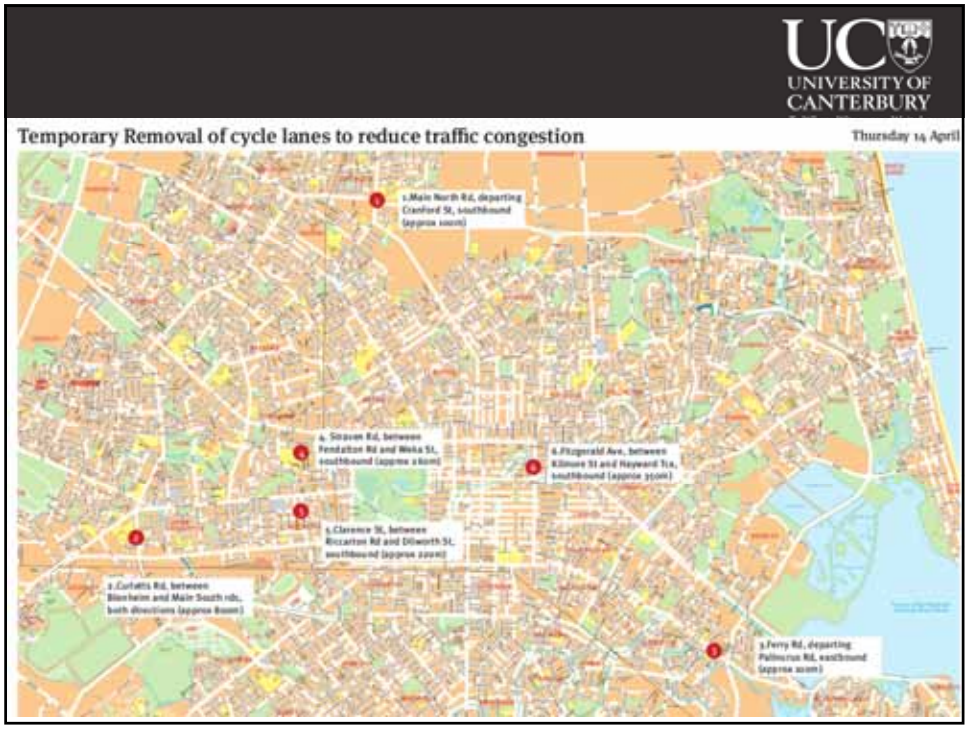
Secure cyclists against car doors
A wide median buffer secures cyclists against car doors opening into the cycle track, and provides car passengers with an arrival platform.

Buffer & left-hand signaling
Signal left-turns separately and create a buffer which allows for visual but not physical contact.

Build-out as part of the service lane
To maintain a clear cycle path, the service lane can "build-out" to shorten crossing distances.

But……..

- Central City Plan is vague on '*How*' and '*When*'
  - Devil will be in the detail
- There is nothing in Canterbury Earthquake Recovery Authority's (CERA) Recovery Strategy about active transport
- Cycle lanes shut post-EQ to accommodate more cars



NEWS

Cyclists get squeezed

Papanui

By BERNADETTE COONEY

Attempts to ease traffic congestion by inserting cycle lanes is counterproductive and further endangers road users, say city cycling lobbyists.

Principal advocates say they fear the lanes may not be reinstated.

Several arterial road cycle lanes, put in as part of bus lanes, have disappeared in post quake recovery.

Robin Delamore, of the Spokes Canterbury cyclists' association, said the 50 to 100 metres of additional road space gained by removing the Main North Road cycle lane from the Cranford Street intersection, created dangerous "pinch points".

"You left only millimetres to spare between buses, trucks and cyclists during peak commuting times, he said.

"It just seems absurd to me that for the sake of a few extra centimetres of road space, cycle lanes have been axed by the city council at a time when a lot of new cyclists are taking to the road, spurred by congestion and rising fuel costs," he said.

"Every car has one person in it at peak times, all heading in relatively the same direction, only adding to the city's congestion problems. You would think alternative transport or efficient car pooling would be encouraged at this time, but all we are seeing in the gains we have made disappearing as the city council displays a knee jerk reaction to traffic flow problems."

More residents were taking to their bikes post quake and the city had an opportunity to strengthen the network of cycle lanes for the future, as a practical and long sighted solution to urban congestion.

"With the roads as they are, you are more likely to arrive sooner on a bike than in a car... So treating them as if they are just another road hazard doesn't help anyone."

Pinch points: The removal of cycle lanes creates dangerous 'pinch points' for cyclists, say cycling activists. Left: Robin Delamore, of Spokes Canterbury, says the removal of main arterial cycle lanes in post quake Christchurch is "just dumb".

"It just seems absurd ... that for the sake of a few extra centimetres of road space, cycle lanes have been axed by the city council at a time when a lot of new cyclists are taking to the road." Robin Delamore

But……..

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- Central City Plan is vague on '*How*' and '*When*'
  - Devil will be in the detail
- There is nothing in Canterbury Earthquake Recovery Authority's (CERA) Recovery Strategy about active transport
- Cycle lanes post-EQ to accommodate more cars
- Roads are being repaired and little evidence of new assistance for people on bikes
- Two recent local plan (*Linwood Village* and *Selwyn St*) consultation documents do not include adequate provision for cyclists

Christchurch - Copenhagen of the South?

For

- Plenty of road space
- Flat terrain
- Mild climate
- Many short journeys
- People like cycling
- Massive infrastructure build soon

Against

- Perceived as dangerous
- Limited investment – GPS (Govt Policy Statement)
- No central govt interest?
- Low population density?
- Our love of cars!
- Little congestion & high speeds

Final Conclusions

- Investing in cycling is very cost effective
  - Especially health benefits
- We must cater for the needs of '*potential*' cyclists
  - Safety is the main issue
  - Consistent infrastructure at junctions
- Separation from traffic
  - Perceived by non-cyclists as safe and attractive
  - Significantly reduces pollution exposure
- Huge opportunity NOW
  - Can't be missed, but might be!


So what will we see in Christchurch?
WIDTH:
KERB
DRIVING LANE
PARKED CARS
BICYCLE PATH
FOOTPATH